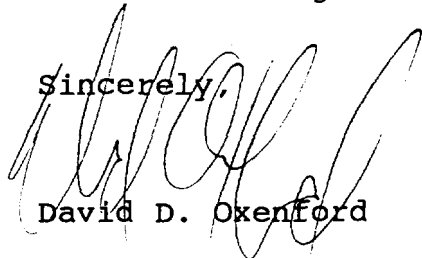


Mr. William F. Caton
December 30, 1993
Page 2

Should there be any questions concerning this matter, please
contact the undersigned.

Sincerely,

A handwritten signature in black ink, appearing to read 'David D. Oxenford', written over the typed name.

David D. Oxenford

DDO/vm
Enclosure

9797-000

FCC 301

FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C. 20544

APPLICATION FOR CONSTRUCTION PERMIT
FOR COMMERCIAL BROADCAST STATION

FOR
FCC
USE
ONLY

FOR COMMISSION USE ONLY

FILE NO. BPH-931230IB

Section 1 - GENERAL INFORMATION

1. APPLICANT NAME

Wayne E. Tate

MAILING ADDRESS (Line 1) (Maximum 35 characters)

310 E. De Young Street

MAILING ADDRESS (Line 2) (If required) (Maximum 35 characters)

CITY

Marion

STATE OR COUNTRY (If foreign address)

Illinois

ZIP CODE

62959

TELEPHONE NUMBER (Include area code)

(618) 993-2148

CALL LETTERS

WVZA

OTHER FCC IDENTIFIER (If applicable)

FOR MAILING THIS APPLICATION, SEE INSTRUCTIONS FOR SECTION 1 - GENERAL INFORMATION

2. A. Is a fee submitted with this application?

B. If No, indicate reason for fee exemption (see 47 C.F.R. Section 1.1112) and go to Question 3.

☐ Governmental Entity

☐ Noncommercial educational licensee

C. If Yes, provide the following information:

Enter in Column (A) the correct Fee Type Code for the service you are applying for. Fee Type Codes may be found in the "Mass Media Services Fee Filing Guide." Column (B) lists the Fee Multiple applicable for this application. Enter in Column (C) the result obtained from multiplying the value of the Fee Type Code in Column (A) by the number listed in Column (B).

(A)

(B)

(C)

FEE TYPE CODE		
1	P	R

FEE MULTIPLE (If required)			
0	0	0	1

FEE DUE FOR FEE TYPE CODE IN COLUMN (A)
\$ 565.00

FOR FCC USE ONLY

to be used only when you are requesting concurrent actions which result in a requirement to list more than one Fee Type Code.

(A)

(B)

(C)

--	--	--

0	0	0	1
---	---	---	---

\$

FOR FCC USE ONLY

ADD ALL AMOUNTS SHOWN IN COLUMN C, LINES (1) THROUGH (2), AND ENTER THE TOTAL HERE. THIS AMOUNT SHOULD EQUAL YOUR ENCLOSED REMITTANCE.

TOTAL AMOUNT REMITTED WITH THIS APPLICATION
\$ 565.00

FOR FCC USE ONLY
565.00

3. This application is for: (check one box)

☐ AM

☒ FM

☐ TV

(b) Channel No. or Frequency

224B1

92.7

(b) Principal
Community

City

Herrin

State

IL

Section I - GENERAL INFORMATION (Page 2)

(c) Check one of the following boxes:

- ☐ Application for NEW station
- ☐ MAJOR change in licensed facilities; call sign: _____
- ☒ MINOR change in licensed facilities; call sign: _____ WVZA
- ☐ MAJOR modification of construction permit; call sign: _____
- File No. of construction permit: _____
- ☐ MINOR modification of construction permit; call sign: _____
- File No. of construction permit: _____
- ☐ AMENDMENT to pending application; Application file number: _____

NOTE: It is not necessary to use this form to amend a previously filed application. Should you do so, however, please submit only Section I and those other portions of the form that contain the amended information.

4. Is this application mutually exclusive with a renewal application?

☐ Yes ☐ No

If Yes, state:

Call letters	Community of License	
	City	State

SECTION VI - EQUAL EMPLOYMENT OPPORTUNITY PROGRAM

1. Does the applicant propose to employ five or more full-time employees?

☐ Yes ☐ No

If Yes, the applicant must include an EEO program called for in the separate Broadcast Equal Employment Opportunity Program Report (FCC 396-A).

SECTION VII - CERTIFICATIONS

1. Has or will the applicant comply with the public notice requirement of 47 C.F.R. Section 73.3580?

☒ Yes ☐ No

2. Has the applicant reasonable assurance, in good faith, that the site or structure proposed in Section V of this form, as the location of its transmitting antenna, will be available to the applicant for the applicant's intended purpose?

☒ Yes ☐ No

Exhibit No.

If No, attach as an Exhibit, a full explanation.

3. If reasonable assurance is not based on applicant's ownership of the proposed site or structure, applicant certifies that it has obtained such reasonable assurance by contacting the owner or person possessing control of the site or structure.

Name of Person Contacted

Dennis Doelitzsch

Telephone No. (include area code)

(618) 997-8123

Person contacted: (check one box below)

☒ Owner

☐ Owner's Agent

☐ Other (specify)

4. By checking Yes, the applicant certifies that, in the case of an individual applicant, he or she is not subject to a denial of federal benefits that includes FCC benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. Section 862, or, in the case of a non-individual applicant (e.g., corporation, partnership or other unincorporated association), no party to the application is subject to a denial of federal benefits that includes FCC benefits pursuant to that section. For the definition of a "party" for these purposes, see 47 C.F.R. Section 1.2002(b).

☒ Yes ☐ No

2a. The APPLICANT hereby waives any claim to the use of any particular frequency as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise, and requests an authorization in accordance with this application. (See Section 304 of the Communications Act of 1934, as amended.)

The APPLICANT acknowledges that all the statements made in this application and attached exhibits are considered material representations, and that all exhibits are a material part hereof and incorporated herein.

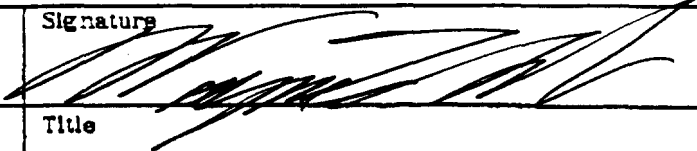
The APPLICANT represents that this application is not filed for the purpose of impeding, obstructing, or delaying determination on any other application with which it may be in conflict.

In accordance with 47 C.F.R. Section 1.65, the APPLICANT has a continuing obligation to advise the Commission, through amendments, of any substantial and significant changes in information furnished.

SECTION VII - CERTIFICATION (Page 2)

WILLFUL FALSE STATEMENTS MADE ON THIS FORM ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. CODE, TITLE 18, SECTION 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. CODE, TITLE 47, SECTION 312(a)(1)), AND/OR FORFEITURE (U.S. CODE, TITLE 47, SECTION 503).

I certify that the statements in this application are true and correct to the best of my knowledge and belief, and are made in good faith.

Name of Applicant Wayne E. Tate	Signature 
Date December 29, 1993	Title Permittee

FCC NOTICE TO INDIVIDUALS REQUIRED BY THE PRIVACY ACT
AND THE PAPERWORK REDUCTION ACT

The solicitation of personal information requested in this application is authorized by the Communications Act of 1934, as amended. The Commission will use the information provided in this form to determine whether grant of the application is in the public interest. In reaching that determination, or for law enforcement purposes, it may become necessary to refer personal information contained in this form to another government agency. In addition, all information provided in this form will be available for public inspection. If information requested on the form is not provided, processing of the application may be delayed or the application may be returned without action pursuant to the Commission's rules. Your response is required to obtain the requested authority.

Public reporting burden for this collection of information is estimated to vary from 72 hours 40 minutes to 347 hours 25 minutes with an average of 208 hours 32 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, can be sent to the Federal Communications Commission, Information Resources Branch, Room 416, Paperwork Reduction Project, Washington, D.C. 20554, and to the Office of Management and Budget, Paperwork Reduction Project (3060-0027), Washington, D.C. 20503.

THE FOREGOING NOTICE IS REQUIRED BY THE PRIVACY ACT OF 1974, P.L. 93-578, DECEMBER 31, 1974, 5 U.S.C. 552a, AND THE PAPERWORK REDUCTION ACT OF 1980, P.L. 96-311, DECEMBER 11, 1980, 44 U.S.C. 3607.

ENGINEERING EXHIBIT

APPLICATION FOR CONSTRUCTION PERMIT
TO UPGRADE TO CLASS B1 AND INCREASE POWER

WAYNE E. TATE
WVZA(FM), HERRIN, ILLINOIS

DECEMBER 1993

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ENGINEERING STATEMENT

This Engineering Statement and the attached figures have been prepared by B. Benjamin Evans of Evans Associates, Consulting Communications Engineers in Thiensville, Wisconsin, on behalf of Wayne E. Tate, permittee of Radio Station WVZA(FM) in Herrin, Illinois.

PRELIMINARY

WVZA is presently authorized to operate on Channel 224A (92.7 MHz) with 3.3 kilowatts effective radiated power and 132 meters antenna height above average terrain, from a transmitter site which is the existing site of the WDDD(AM), Johnston City, IL daytime antenna, and WDDD-FM, licensed to Marion, IL. By this application, WVZA proposes to upgrade to Class B1 status on Channel 224, in accordance with the Commission's new "one-step" procedure, and to increase the transmitting facilities using the authorized site. The assignment of Channel 224B1 to Herrin will require that station KYLS in Ironton, MO move off its present Channel 224A. An application is being filed simultaneously with the instant application to change KYLS to Channel 225A, as per the Commission's "one-step" procedure.

The facilities requested herein are being applied for under Section 73.215 of the FCC Rules in order to permit short-spacings to WBKR, Channel 223C in Owensboro, KY, and WSEI, Channel 225B in Olney, IL. A waiver of Section 73.215 is hereby requested in order to permit a contour overlap with station WBKR.

AVAILABILITY OF FULLY-SPACED SITE

As required under the "one-step" procedure for upgrades, a fully-spaced site exists for Channel 224B1 at Herrin, under the condition that KYLS change to Channel 225A as mentioned above (see attached Figure 5-A). The coordinates of this site are:

N. Lat. 37°-45'-51"; W. Long. 89°-13'-42"

From the above site, it is 18.3 kilometers to Herrin on a bearing of 76° True. Since a full Class B1 station's predicted 70 dBu contour extends an average of 23.2 kilometers, city of license coverage from this site is assured.

Engineering Statement - Page 2
WVZA(FM), Herrin, IL

PROPOSED FACILITIES

A directional antenna is being proposed herein, which is described fully in attached Figure 3. It is proposed herein to increase the effective radiated power to 14.5 KW in the direction of maximum radiation. The antenna HAAT is being revised slightly, from 132 meters to 133 meters. The power and antenna height combination proposed is equivalent to 25 KW ERP and 100 meters HAAT, the maximum for a Class B1 station.

The proposed WVZA facility will serve an area of 3,776 square kilometers and a population of 171,226 persons with a predicted 1 mv/m signal or better. The area was determined by numerical integration. The population was determined on the basis of the 1990 U.S. Census figures.

AUTHORITY REQUESTED UNDER SECTION 73.215

The instant proposal would short-space WBKR, Owensboro, KY by 26 kilometers. The maximum amount of short-spacing according to Section 73.215 is 28 kilometers; thus, the proposal is in compliance with the minimum spacing for a short-spaced site.

The directional antenna showed herein was designed specifically so that WVZA would maintain the same signal as is presently authorized in the direction of WBKR over a 110-degree arc. As seen in attached Figure 4, however, WVZA would receive contour overlap within its protected Class B1 contour. This overlap is due entirely to the fact that the protected contour of WVZA becomes 57 dBu instead of 60 dBu. The Class B1 facilities proposed herein would not exceed the authorized Class A facilities of WVZA, which causes no overlap with WBKR, in the direction of WBKR. Therefore, the "creation" of overlap as a result of this proposal is due entirely to the different contour level used for Class B1 than for Class A, when, in fact, no overlap will be created beyond where it had existed previously. Figure 4 shows this to be the case. The proposed 57 dBu does not extend past the 57 dBu contour of the present Class A facility where there is existing overlap.

A waiver, therefore, is requested to permit this contour overlap condition. Grant of this waiver is in the public interest because:

- 1) WVZA would then be able to use its presently authorized site, which is a multi-station site, rather than bear the burden of building a new tower at a different site just for the new WVZA facility;

Engineering Statement - Page 3
WVZA(FM), Herrin, IL

- 2) as shown above, the signal toward WBKR would not be increased beyond WVZA's present authorization, and in addition, WBKR would not receive overlap within its protected contour;
- 3) with the waiver, WVZA would not be required to reduce power to the east, and thus could retain all of its presently authorized coverage;
- 4) with the waiver, WVZA would not be required to employ a directional antenna with a maximum-to-minimum radiation ratio in excess of 15 dB in order to be at full Class B1 power in the major lobe of the pattern, thereby greatly reducing the possibility of "picket-fencing" in areas to the east.

The facility proposed herein would short-space WSEI, Olney, IL by 16 kilometers, which is less than the maximum amount that WSEI can be short-spaced (31 kilometers). As seen in Figure 4, all contour protection criteria regarding WSEI are observed.

BLANKETING

The proposed blanket contour, calculated in accordance with Paragraph 73.318(a) of the Commission's rules, extends a maximum of 1.5 kilometers from the transmitter site. The applicant will resolve all known complaints of blanketing interference within this contour in accordance with Section 73.318.

COVERAGE REQUIREMENTS

The herein-proposed facility will cover all of the city of Herrin with a 3.16 mv/m signal or better.

INTERFERENCE CONSIDERATIONS

As mentioned previously, WVZA shares its transmitter site with WDDD(AM) and WDDD-FM. If instances of objectionable interference to WDDD(AM), WDDD-FM, or any other station due to the proposed facility should arise, the applicant will cooperate fully, as appropriate, to eliminate the interference.

Engineering Statement - Page 4
WVZA(FM), Herrin, IL

The signals of WVZA are not expected to mix with WDDD-FM to cause receiver-induced third order intermodulation (RITOI) interference to another station. If, however, interference of this type does occur, WVZA will satisfy all verified complaints of reception problems, except those involving mobile or battery-powered receivers.

ENVIRONMENTAL CONSIDERATIONS

Because of the fact that this proposal involves installing an antenna on an existing antenna structure without increasing the structure height, this proposal will have no physical environmental impact.

The proposed facility meets the radio frequency radiation exposure guidelines recommended in ANSI C95.1-1982. Using calculation methods described in OST Bulletin 65, the total power density due to WDDD(AM), WDDD-FM and the proposed WVZA facility, would be less than the maximum permissible level in areas around the tower that are accessible by casual approach. The power density due to WDDD-FM and WVZA, added together, at any location two meters above ground beneath the antennas, would not exceed 0.244 mW/cm^2 , or 24.4% of the ANSI maximum. The applicant will install a fence around the tower with a radius of 2 meters, if the existing fence does not meet this specification. Using Table 1 of Appendix D of the Bulletin, the power density at 2 meters due to WDDD(AM), which operates with 250 watts, would be 62.5% or less of the ANSI maximum. The total power density due to all three stations, then, would be 86.9% or less of the ANSI maximum. Therefore, the proposed facility is within the ANSI guidelines for exposure to the public.

When construction or maintenance is to be performed at the site, workers will be protected from overexposure to RF radiation by either reducing transmitting power or turning off the power completely, as necessary. Prior to commencement of program tests, an agreement among the users of the tower will be in effect requiring the stations to do what is necessary to assure worker safety with respect to RF exposure.

Therefore, in view of the above, this proposal is not deemed to be a major environmental action.

Engineering Statement - Page 5
WVZA(FM), Herrin, IL

ATTACHMENTS

Affidavit

FCC Form 301, Section V-B

Figure 1 - - - - Vertical Plan Sketch of Antenna Structure

Figure 2 - - - - Map Showing Proposed Predicted Service Contours

Figure 3 - - - - Directional Antenna Patterns & Description

Figure 4 - - - - Contour Study Per Section 73.215 of FCC Rules

Figure 5-A - - - Allocation Study - Channel 224B1 Reference Point

Figure 5-B - - - Allocation Study - Present WVZA Site

A F F I D A V I T

COUNTY OF OZAUKEE

STATE OF WISCONSIN

} SS:

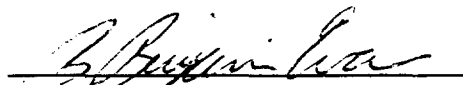
B. BENJAMIN EVANS, being duly sworn upon oath deposes and says:

That his qualifications are a matter of record with the Federal Communications Commission;

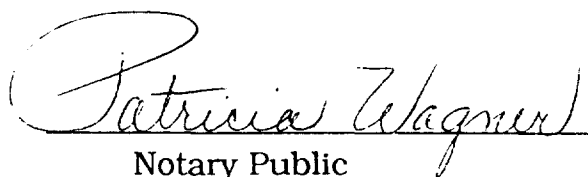
That he is a Consulting TeleCommunications Engineer in Wisconsin, and is a partner in the firm of Evans Associates;

That this firm has been retained by Wayne E. Tate to prepare this engineering exhibit;

That he has either prepared or directly supervised the preparation of all technical information contained in this engineering statement, and that the facts stated in this engineering statement are true of his knowledge, except as to such statements as are herein stated to be on information and belief and as to such statements he believes them to be true.


B. Benjamin Evans

Subscribed and sworn to before me this 9th day of December, 1993.

 My Commission expires 5/5/94.
Notary Public

Section V-B - FM BROADCAST ENGINEERING DATA

FOR COMMISSION USE ONLY

File No. _____

ASB Referral Date _____

Referred by _____

Name of Applicant

Wayne E. Tate

Call letters (if issued)

WVZA

Is this application being filed in response to a window? ☐ Yes ☒ No

If Yes, specify closing date: _____

Purpose of Application: (check appropriate boxes)

☐ Construct a new (main) facility

☐ Construct a new auxiliary facility

☒ Modify existing construction permit for main facility

☐ Modify existing construction permit for auxiliary facility

☐ Modify licensed main facility

☐ Modify licensed auxiliary facility

If purpose is to modify, indicate below the nature of change(s) and specify the file number(s) of the authorizations affected.

(a) ☐ Antenna supporting-structure height

☒ Effective radiated power

☐ Antenna height above average terrain

☐ Frequency

☐ Antenna location

☒ Class

☐ Main Studio location

☒ Other (Summarize briefly)

Specify a directional antenna

File Number(s) BMPH-930804IB

1. Allocation:

Channel No.	Principal community to be served:		
	City	County	State
224	Herrin	Williamson	IL

Class (check only one box below)

☐ A ☒ B1 ☐ B ☐ C3

☐ C2 ☐ C1 ☐ C

2. Act location of antenna.

(a) Specify address, city, county and state. If no address, specify distance and bearing relative to the nearest town or landmark.

No change

(b) Geographical coordinates (to nearest second). If mounted on element of an AM array, specify coordinates of center of array. Otherwise, specify tower location. Specify South Latitude or East Longitude where applicable; otherwise, North Latitude or West Longitude will be presumed.

Latitude	37	°	45	'	15	"	Longitude	88	°	56	'	05	"
----------	----	---	----	---	----	---	-----------	----	---	----	---	----	---

3. Is the supporting structure the same as that of another station(s) or proposed in another pending application(s)? ☒ Yes ☐ No

If Yes, give call letter(s) or file number(s) or both.

WDDD-FM, WDDD (AM)

If proposal involves a change in height of an existing structure, specify existing height above ground level including antenna, all other appurtenances, and lighting, if any.

N/A

4. Does the application propose to correct previous site coordinates?

☐ Yes ☒ No

If Yes, list old coordinates.

Latitude	0	'	"	Longitude	0	'	"
----------	---	---	---	-----------	---	---	---

5. Has the FAA been notified of the proposed construction? N/A

☐ Yes ☐ No

If Yes, give date and office where notice was filed and attach as an Exhibit a copy of FAA determination, if available.

Exhibit No.

Date _____ Office where filed _____

6. List all landing areas within 8 km of antenna site. Specify distance and bearing from structure to nearest point of the nearest runway.

Landing Area	Distance (km)	Bearing (degrees True)
(a) _____	N/A	_____
(b) _____	_____	_____

7. (a) Elevation: (to the nearest meter)

(1) of site above mean sea level; _____ 147 meters

(2) of the top of supporting structure above ground (including antenna, all other appurtenances, and lighting, if any); and _____ 149 meters

(3) of the top of supporting structure above mean sea level $[(a)(1) + (a)(2)]$ _____ 296 meters

(b) Height of radiation center: (to the nearest meter) H - Horizontal; V - Vertical

(1) above ground _____ 123 meters (H)

_____ 123 meters (V)

(2) above mean sea level $[(a)(1) + (b)(1)]$ _____ 270 meters (H)

_____ 270 meters (V)

(3) above average terrain _____ 133 meters (H)

_____ 133 meters (V)

8. Attach as an Exhibit sketch(es) of the supporting structure, labelling all elevations required in Question 7 above, except item 7(b)(3). If mounted on an AM directional-array element, specify heights and orientations of all array towers, as well as location of FM radiator.

Exhibit No.
Fig. 1

9. Effective Radiated Power:

(a) ERP in the horizontal plane

_____ 14.5 kw (H*) _____ 14.5 kw (V*)

(b) Is beam tilt proposed?

☐ Yes ☒ No

If Yes, specify maximum ERP in the plane of the tilted beam, and attach as an Exhibit a vertical elevational plot of radiated field.

Exhibit No.

_____ kw (H*) _____ kw (V*)

*Polarization

4. Does the application propose to correct previous site coordinates?

☐ Yes ☒ No

If Yes, list old coordinates.

Latitude	°	'	"	Longitude	°	'	"
----------	---	---	---	-----------	---	---	---

5. Has the FAA been notified of the proposed construction? N/A

☐ Yes ☐ No

If Yes, give date and office where notice was filed and attach as an Exhibit a copy of FAA determination, if available.

Exhibit No.

Date _____ Office where filed _____

6. List all landing areas within 8 km of antenna site. Specify distance and bearing from structure to nearest point of the nearest runway.

Landing Area	Distance (km)	Bearing (degrees True)
(a) _____	N/A	_____
(b) _____	_____	_____

7. (a) Elevation: (to the nearest meter)

(1) of site above mean sea level; 147 meters(2) of the top of supporting structure above ground (including antenna, all other appurtenances, and lighting, if any); and 149 meters(3) of the top of supporting structure above mean sea level [(aX1) + (aX2)] 296 meters

(b) Height of radiation center: (to the nearest meter) H = Horizontal; V = Vertical

(1) above ground 123 meters (H)123 meters (V)(2) above mean sea level [(aX1) + (bX1)] 270 meters (H)270 meters (V)(3) above average terrain 133 meters (H)133 meters (V)

8. Attach as an Exhibit sketch(es) of the supporting structure, labelling all elevations required in Question 7 above, except item 7(b)(3). If mounted on an AM directional-array element, specify heights and orientations of all array towers, as well as location of FM radiator.

Exhibit No.
Fig. 1

9. Effective Radiated Power:

(a) ERP in the horizontal plane

14.5 kw (H*) 14.5 kw (V*)

(b) Is beam tilt proposed?

☐ Yes ☒ No

If Yes, specify maximum ERP in the plane of the tilted beam, and attach as an Exhibit a vertical elevational plot of radiated field.

Exhibit No.

_____ kw (H*) _____ kw (V*)

*Polarization

10. Is a directional antenna proposed?

☒ Yes ☐ No

If Yes, attach as an Exhibit a statement with all data specified in 47 C.F.R. Section 73.316, including plot(s) and tabulations of the relative field.

Exhibit No.
Fig. 3

11. Will the proposed facility satisfy the requirements of 47 C.F.R. Sections 73.315(a) and (b)?

☒ Yes ☐ No

If No, attach as an Exhibit a request for waiver and justification therefor, including amounts and percentages of population and area that will not receive 316 mV/m service.

Exhibit No.

12. Will the main studio be within the protected 316 mV/m field strength contour of this proposal?

☒ Yes ☐ No

If No, attach as an Exhibit justification pursuant to 47 C.F.R. Section 73.1125.

Exhibit No.

13. (a) Does the proposed facility satisfy the requirements of 47 C.F.R. Section 73.207?

☐ Yes ☒ No

(b) If the answer to (a) is No, does 47 C.F.R. Section 73.213 apply?

☐ Yes ☒ No

(c) If the answer to (b) is Yes, attach as an Exhibit a justification, including a summary of previous waivers.

Exhibit No.

(d) If the answer to (a) is No and the answer to (b) is No, attach as an Exhibit a statement describing the short spacing(s) and how it or they arose. Application is made pursuant to Section 73.215 of FCC Rules

Exhibit No.
Eng.

(e) If authorization pursuant to 47 C.F.R. Section 73.215 is requested, attach as an Exhibit a complete engineering study to establish the lack of prohibited overlap of contours involving affected stations. The engineering study must include the following:

Exhibit No.
Fig. 4

- (1) Protected and interfering contours, in all directions (360), for the proposed operation.
- (2) Protected and interfering contours, over pertinent arcs, of all short-spaced assignments, applications and allotments, including a plot showing each transmitter location, with identifying call letters or file numbers, and indication of whether facility is operating or proposed. For vacant allotments, use the reference coordinates as the transmitter location.
- (3) When necessary to show more detail, an additional allocation study utilizing a map with a larger scale to clearly show prohibited overlap will not occur.
- (4) A scale of kilometers and properly labeled longitude and latitude lines, shown across the entire exhibit(s). Sufficient lines should be shown so that the location of the sites may be verified.
- (5) The official title(s) of the map(s) used in the exhibits(s).

14. Are there: (a) within 60 meters of the proposed antenna, any proposed or authorized FM or TV transmitters, or any nonbroadcast (except citizens band or amateur) radio stations; or (b) within the blanketing contour, any established commercial or government receiving stations, cable head-end facilities, or populated areas; or (c) within ten (10) kilometers of the proposed antenna, any proposed or authorized FM or TV transmitters which may produce receiver-induced intermodulation interference?

☒ Yes ☐ No

If Yes, attach as an Exhibit a description of any expected, undesired effects of operations and remedial steps to be pursued if necessary, and a statement accepting full responsibility for the elimination of any objectionable interference (including that caused by receiver-induced or other types of modulation) to facilities in existence or authorized or to radio receivers in use prior to grant of this application. (See 47 C.F.R. Sections 73.315(b), 73.316(e) and 73.318.)

Exhibit No.
Eng.

15. Attach as an Exhibit a 7.5 minute series U.S. Geological Survey topographic quadrangle map that shows clearly, legibly, and accurately, the location of the proposed transmitting antenna. This map must comply with the requirements set forth in Instruction V (D). The map must further clearly and legibly display the original printed contour lines and data as well as latitude and longitude markings, and must bear a scale of distance in kilometers.

Exhibit No.
On File

No Change

16. Attach as an Exhibit *(name the source)* a map which shows clearly, legibly, and accurately, and with the original printed latitude and longitude markings and a scale of distance in kilometers:

Exhibit No.
Fig. 2

(a) the proposed transmitter location, and the radials along which profile graphs have been prepared;

(b) the 3.16 mV/m and 1 mV/m predicted contours; and

(c) the legal boundaries of the principal community to be served.

17. Specify area in square kilometers (1 sq. mi. = 2.59 sq. km.) and population (latest census) within the predicted 1 mV/m contour.

Area 3,776 sq. km. Population 171,226 (1990 Census)

18. For an application involving an auxiliary facility only, attach as an Exhibit a map *(Sectional Aeronautical Chart or equivalent)* that shows clearly, legibly, and accurately, and with latitude and longitude markings and a scale of distance in kilometers:

Exhibit No.
N/A

(a) the proposed auxiliary 1 mV/m contour; and

(b) the 1 mV/m contour of the licensed main facility for which the applied-for facility will be auxiliary. Also specify the file number of the license.

19. *gain and coverage data (to be calculated in accordance with 47 C.F.R. Section 73.313)*

Source of terrain data: *(check only one box below)*

☒ Linearly interpolated 30-second database ☐ 7.5 minute topographic map

(Source: National Geophysical Data Center)

☐ Other *(briefly summarize)*

Radial bearing (degrees True)	Height of radiation center above average elevation of radial from 3 to 16 km (meters) ERP (KW)		Predicted Distances	
			To the 3.16 mV/m contour (kilometers)	To the 1 mV/m contour (kilometers)
304 *	144.5	14.5	24.16	40.66
0	143.2	10.5	22.24	37.81
45	123.7	3.2	15.40	27.16
90	122.5	3.2	15.32	27.03
135	128.1	3.2	15.68	27.60
180	126.6	8.2	19.68	33.83
225	138.2	14.5	23.66	39.88
270	132.6	14.5	23.19	39.16
315	149.4	14.5	24.54	41.25

*Radial through principal community, if not one of the major radials. This radial should NOT be included in the calculation of HAAT.

20. Environmental Statement/See 47 C.F.R. Section 1.1301 et seq./

Would a Commission grant of this application come within Section 1.1307 of the FCC Rules, such that it may have a significant environmental impact? ☐ Yes ☒ No

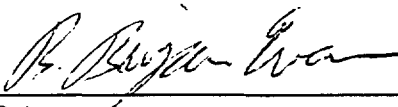
If you answer Yes, submit as an Exhibit an Environmental Assessment required by Section 1.1311.

Exhibit No.

If No, explain briefly why not. See Engineering Statement

CERTIFICATION

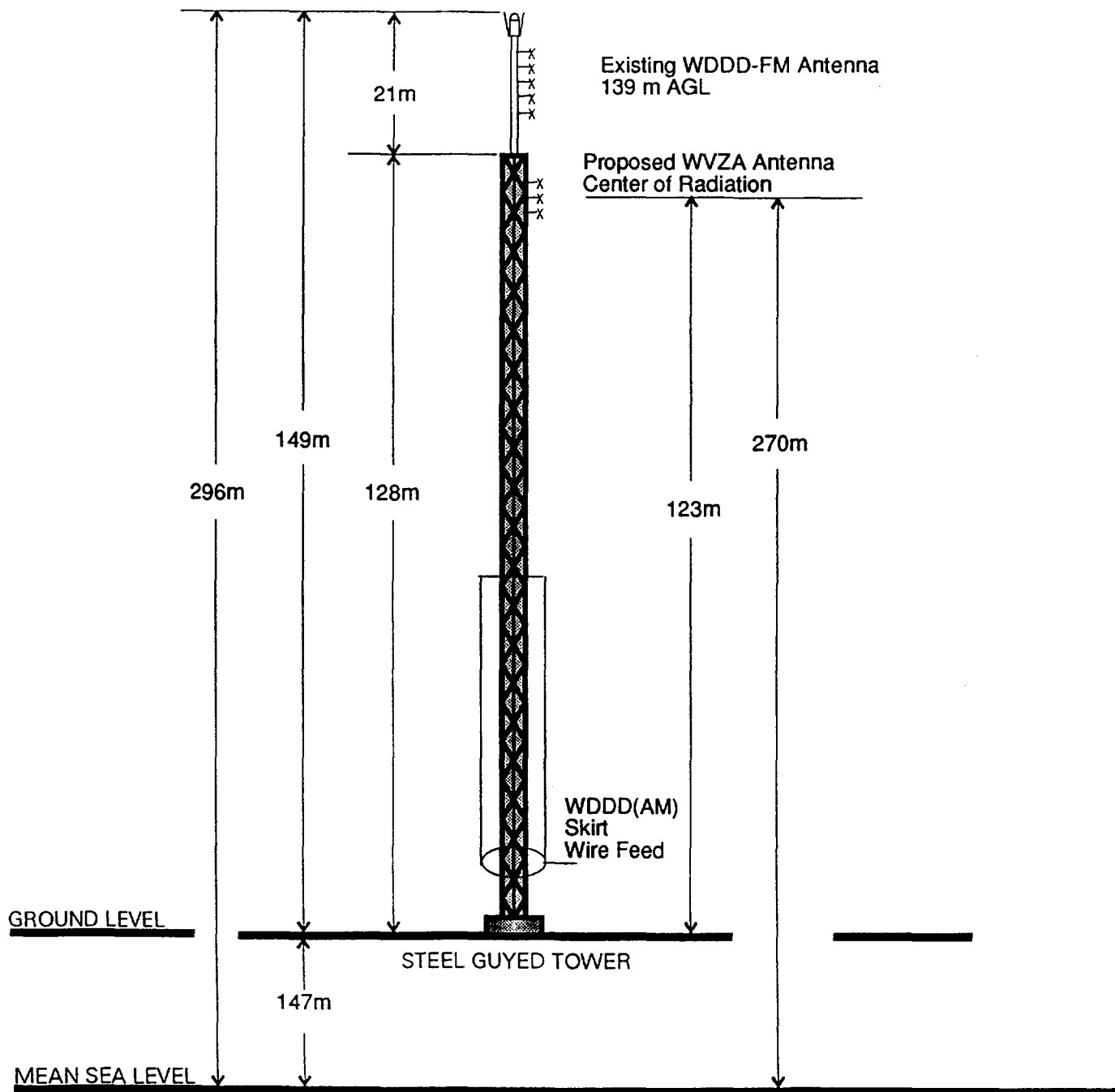
I certify that I have prepared this Section of this application on behalf of the applicant, and that after such preparation, I have examined the foregoing and found it to be accurate and true to the best of my knowledge and belief.

Name (Typed or Printed) B. Benjamin Evans	Relationship to Applicant (e.g., Consulting Engineer) Consulting Engineer
Signature 	Address (Include ZIP Code) 216 N. Green Bay Road Thiensville, WI 53092
Date December 9, 1993	Telephone No. (Include Area Code) (414) 242-6000

TO BE USED FOR CONSTRUCTION

TRANSMIT AND RECEIVE TRANSMISSION LINES TO
HAVE APPROPRIATE CROSS MODULATION FILTERING

FIGURE 1



VERTICAL PLAN SKETCH OF ANTENNA STRUCTURE

WVZA (FM)
Herrin, Illinois

Channel 224 B1 14.5 kW ERP 133m HAAT

FIGURE 2
PROPOSED PREDICTED SERVICE CONTOURS
WVZA(FM) HERRIN, ILLINOIS
14.5 KW ERP - 133 M HAAT

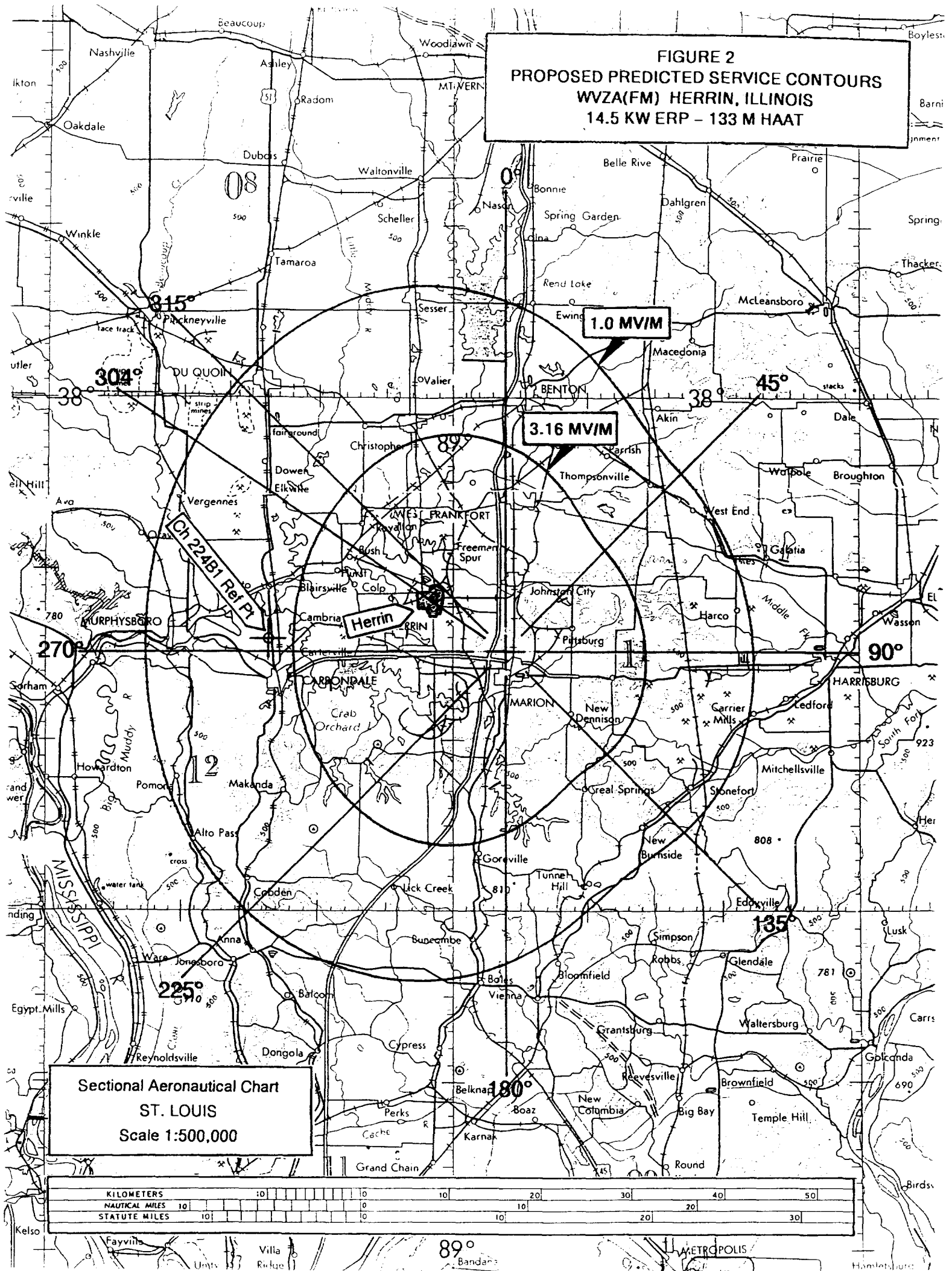
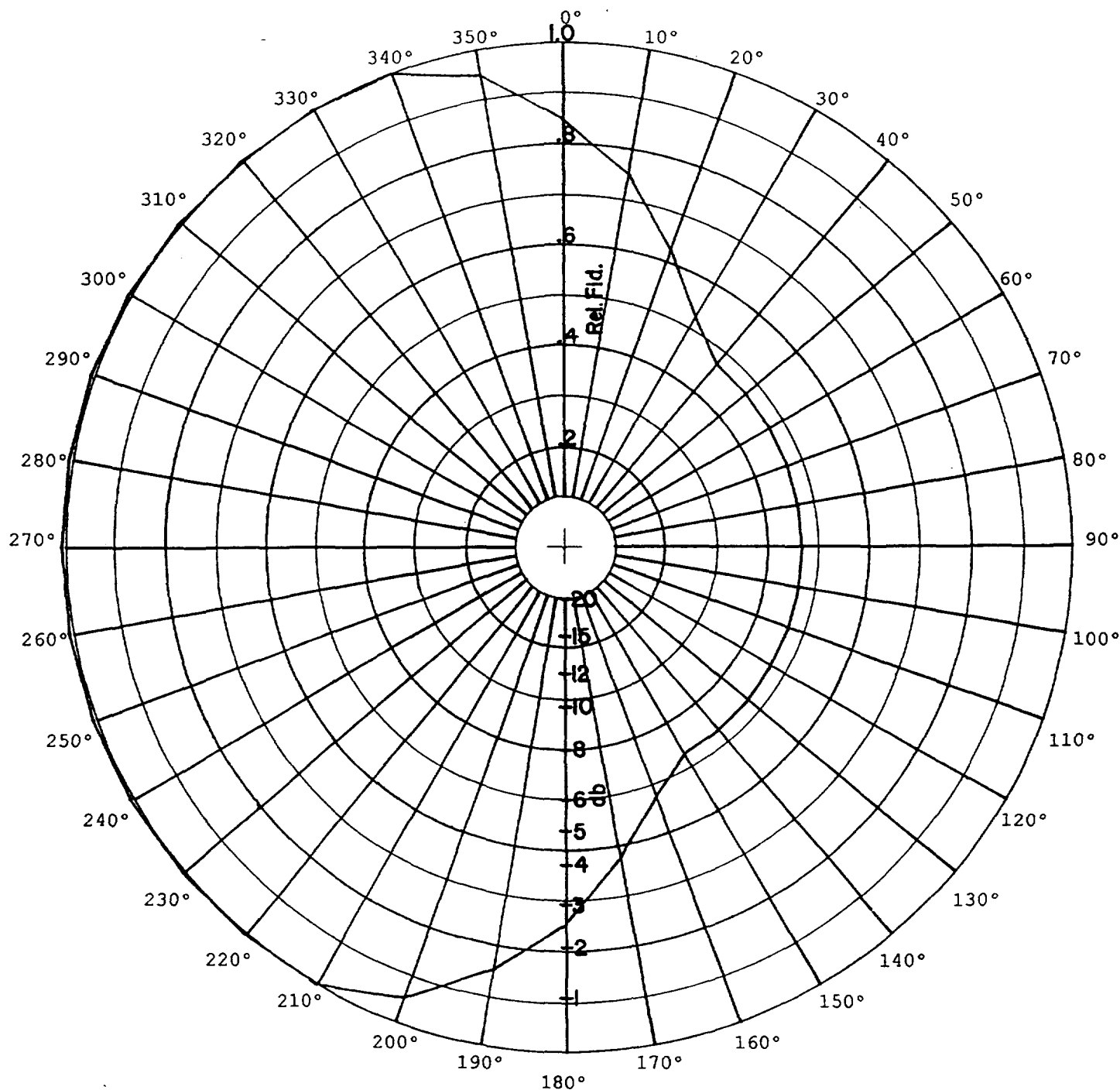


FIGURE 3-A

EVANS ASSOCIATES
Consulting Engineers

HORIZONTAL PLANE RELATIVE FIELD PATTERN



STATION: WYZA

DATE: 12/93

FREQUENCY: 92.7 MHz

ANTENNA TYPE:

RMS: 0.790

MAJOR LOBE GAIN: 2.4

ELEVATION GAIN: 1.5

COMMENTS:

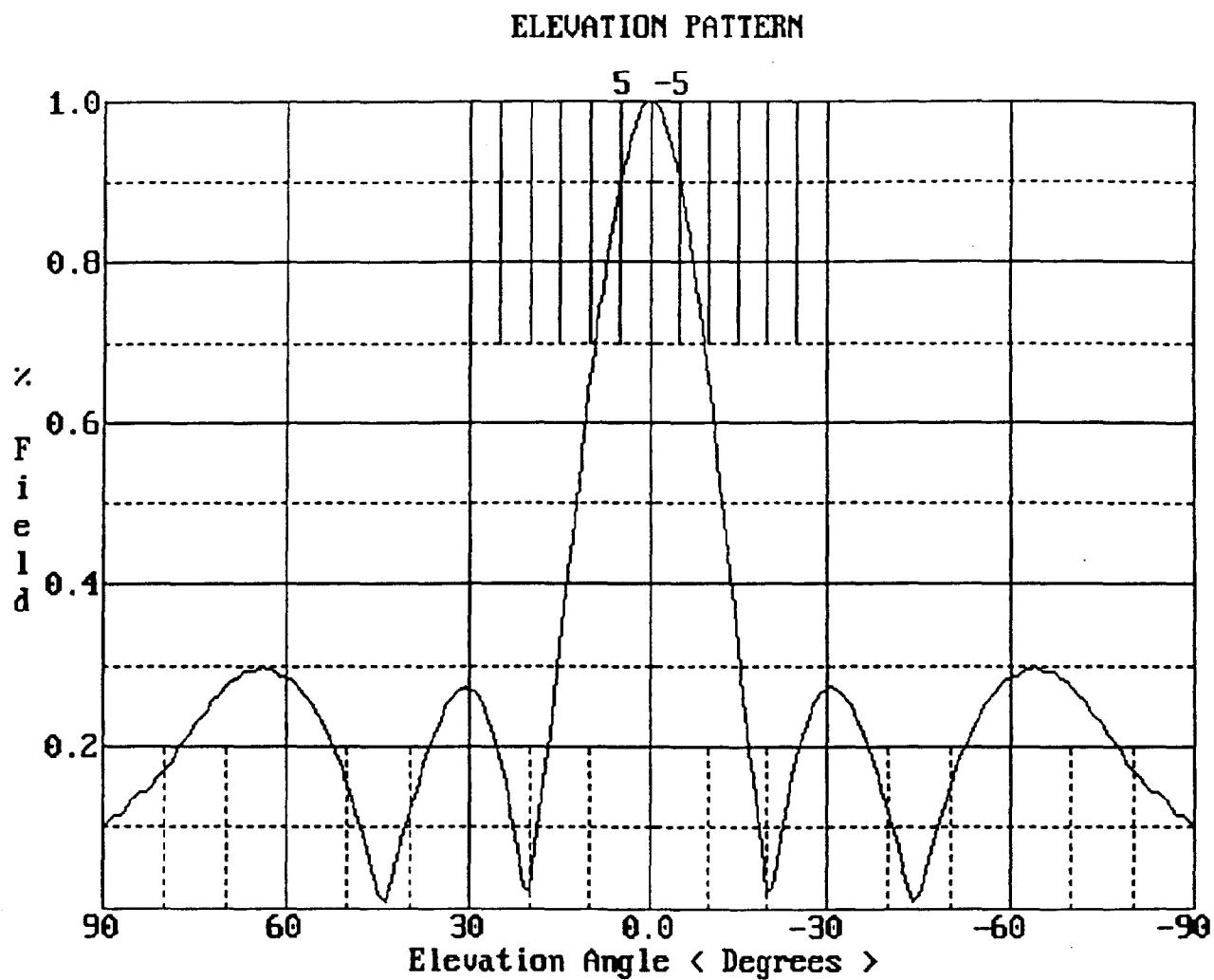
EVANS ASSOCIATES
Consulting Engineers

TABULATION OF HORIZONTAL PLANE RADIATIONS

Radio Station WVZA(FM)
Herrin, Illinois

Azimuth (deg T)	Relative Field	Power (KW)	Power (dBk)	Azimuth (deg T)	Relative Field	Power (KW)	Power (dBk)
0.0	0.850	10.476	+10.20	190.0	0.850	10.476	+10.20
10.0	0.750	8.156	+9.11	200.0	0.950	13.086	+11.17
20.0	0.625	5.664	+7.53	210.0	1.000	14.500	+11.61
30.0	0.525	3.997	+6.02	220.0	1.000	14.500	+11.61
40.0	0.473	3.244	+5.11	225.0	1.000	14.500	+11.61
45.0	0.473	3.244	+5.11	230.0	1.000	14.500	+11.61
50.0	0.473	3.244	+5.11	240.0	1.000	14.500	+11.61
60.0	0.473	3.244	+5.11	250.0	1.000	14.500	+11.61
70.0	0.473	3.244	+5.11	260.0	1.000	14.500	+11.61
80.0	0.473	3.244	+5.11	270.0	1.000	14.500	+11.61
90.0	0.473	3.244	+5.11	280.0	1.000	14.500	+11.61
100.0	0.473	3.244	+5.11	290.0	1.000	14.500	+11.61
110.0	0.473	3.244	+5.11	300.0	1.000	14.500	+11.61
120.0	0.473	3.244	+5.11	304.0	1.000	14.500	+11.61
130.0	0.473	3.244	+5.11	310.0	1.000	14.500	+11.61
135.0	0.473	3.244	+5.11	315.0	1.000	14.500	+11.61
140.0	0.473	3.244	+5.11	320.0	1.000	14.500	+11.61
150.0	0.473	3.244	+5.11	330.0	1.000	14.500	+11.61
160.0	0.525	3.997	+6.02	340.0	1.000	14.500	+11.61
170.0	0.625	5.664	+7.53	350.0	0.950	13.086	+11.17
180.0	0.750	8.156	+9.11				

EVANS ASSOCIATES
Consulting Engineers



Customer: _____ date: _____

Frequency: _____ Type: _____ Bays: 3 Spacing: 1.0 wave

Beam tilt: 0 Null fill: 0 %

Notes: Elevation pattern plotted in relative field

Figure 3-D

DESCRIPTION OF PROPOSED DIRECTIONAL ANTENNA

WVZA(FM), Herrin, Illinois

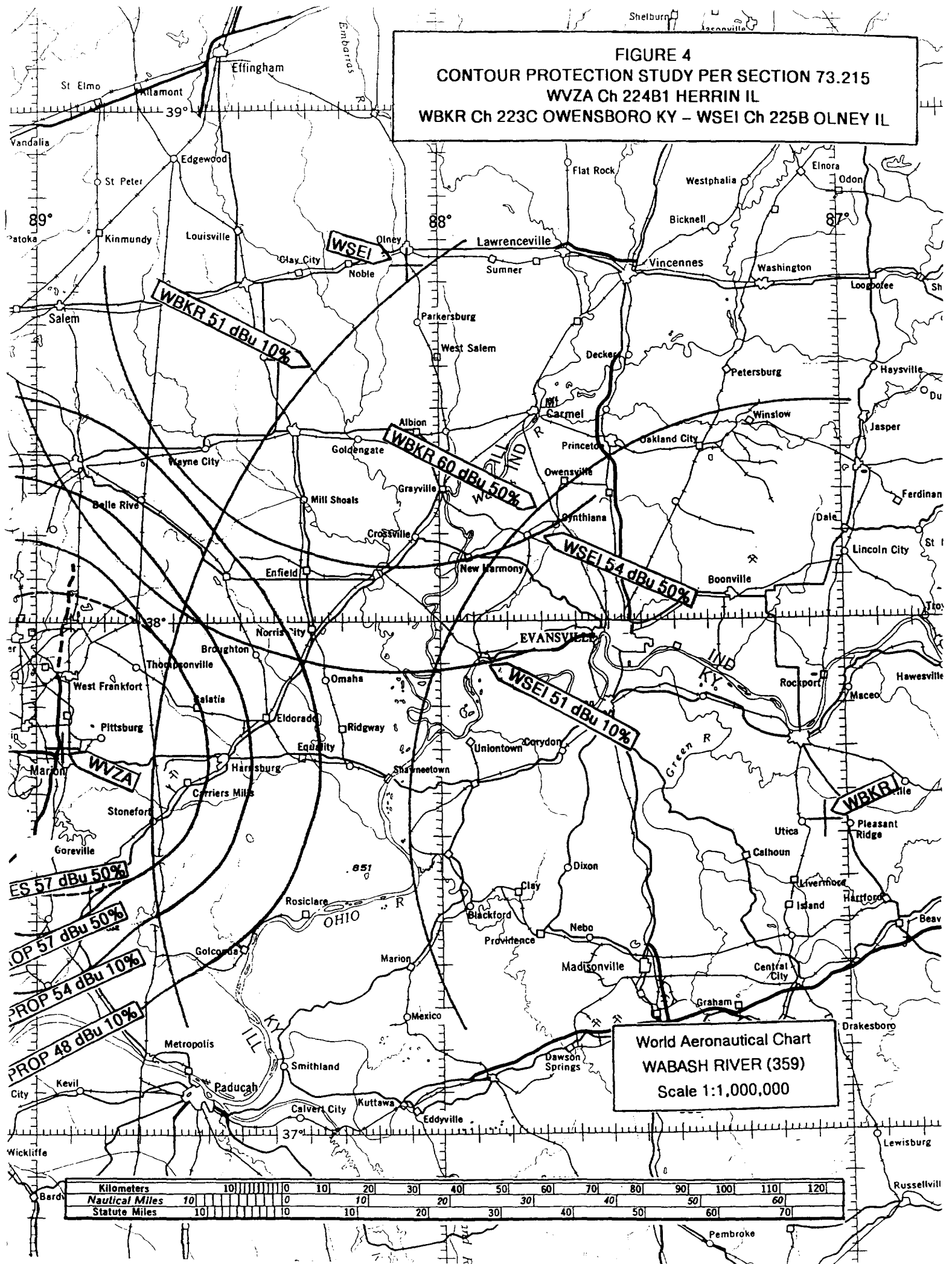
In order to achieve the directional antenna pattern shown in attached Figure 3-A, it is proposed to employ a custom 3-bay full-wavelength spaced directional antenna to be side-mounted on an existing tower.

Both horizontal and vertical polarizations will be utilized. Horizontal and/or vertical parasitic elements will be installed, as appropriate, so that the measured pattern in both the horizontal and vertical polarizations will match the pattern in Figure 3-A as closely as possible.

Neither the horizontal nor the vertical radiation component of the pattern in Figure 3-A changes more than 2 dB per 10 degrees of azimuth, nor does either component exceed a maximum-to-minimum radiation ratio of 15 dB.

The antenna will be mounted on the tower in accordance with specific instructions provided by the manufacturer. The antenna will not be mounted on the same tower level as any other antenna, nor will it be mounted within the minimum horizontal or vertical distance to any other antenna which is specified by the manufacturer as being necessary for proper operation.

FIGURE 4
CONTOUR PROTECTION STUDY PER SECTION 73.215
WVZA Ch 224B1 HERRIN IL
WBKR Ch 223C OWENSBORO KY – WSEI Ch 225B OLNEY IL



World Aeronautical Chart
WABASH RIVER (359)
Scale 1:1,000,000

